FUJITSU

Fujitsu LifeBook

S Series

BIOS Guide

LifeBook S Series Model:

S7210/S7211

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FUJITSU COMPUTER SYSTEMS CORPORATION

S Series BIOS

BIOS SETUP UTILITY

The BIOS Setup Utility is a program that sets up the operating environment for your notebook. Your BIOS is set at the factory for normal operating conditions, therefore there is no need to set or change the BIOS environment to operate your notebook.

The BIOS Setup Utility configures:

- Device control feature parameters, such as changing I/O addresses and boot devices.
- System Data Security feature parameters, such as passwords.

Entering the BIOS Setup Utility

To enter the BIOS Setup Utility, do the following (or use the TrustedCore Menu, as detailed in the next section):

1. Turn on or restart your notebook.
2. Press [F2] once the Fujitsu logo appears on the screen. This will open the main menu of the BIOS Setup Utility with the current settings displayed.
3. Press the [RIGHT ARROW] or [LEFT ARROW] key to scroll through the other setup menus to review or alter the current settings.

Using the TrustedCore Menu

When the Fujitsu logo appears on the screen. press the [Enter] key or click on the left mouse or touchpad button; the TrustedCore Menu will appear.

The TrustedCore Menu provides shortcuts to the following menus and information screens:

- BIOS Setup
- Diagnostic Screen
- Boot Menu
- Recovery and Utility
- Diagnostic Program
- Patent Information
- System Information
- Continue Booting

Clicking on any of the fields will invoke the screen, information, or action described.

The Boot Menu can also be invoked by pressing the [F12] key when the Fujitsu logo appears on the screen.

Navigating through the Setup Utility

The BIOS setup utility consists of six menus: Info, System, Advanced, Security, Boot, and Exit. This document explains each menu in turn, including all submenus and setup items.

The following procedures allow you to navigate the setup utility menus:

1. To select a menu, use the cursor keys: [←], [→]
2. To select a field within a menu or a submenu, use the cursor keys: [↑], [↓].
3. To select the different values for each field, press the [Spacebar] or [+] to change to the next lower selection and [F5] or [-] to go to the next higher selection.
4. To activate a submenu press the [Enter] key.
5. To return to a menu from a submenu, press the [Esc] key.
6. To go to the Exit menu from any other menu, press the [Esc] key.

- Selecting a field causes a help message about that field to be displayed on the right-hand side of the screen.
- Pressing the Enter key with the highlight on a selection that is not a submenu or auto selection will cause a list of all options for that item to be displayed. Pressing the Enter key again will select the highlighted choice.

7. Pressing the [F9] key resets all items in the BIOS to the default values.
8. Pressing the [F10] key saves the current configuration and exits the BIOS Setup Utility. You will be asked to verify this selection before it is executed.
9. Pressing the [F1] key gives you a general help screen.

Entering the Setup Utility After a Configuration Change or System Failure

If there has been a change in the system configuration that does not agree with the parameter settings stored in your BIOS memory, or there is a failure in the system, the system beeps and/or displays an error message after the Power On Self Test (POST). If the failure is not too

severe, it will give you an opportunity to modify the setup utility settings, as described in the following steps:

1. When you turn on or restart the computer there is a beep and/or the following message appears on the screen:

   ```
   Error message - please run SETUP
   program Press <F1> key to continue,
   <F2> to run SETUP
   ```

2. If an error message is displayed on the screen, and you want to continue with the boot process and start the operating system anyway, press the [F1] key.

- If your notebook emits a series of beeps that sounds like a code and the display is blank, please refer to the Troubleshooting Section in the system User's Guide. The Troubleshooting Section includes a list of error messages and their meanings.
- If your data security settings require it, you may be asked for a password before the operating system will be opened.

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3. If an error message is displayed on the screen, and you want to enter the setup utility, press the [F2] key.
4. When the setup utility starts with a fault present, the system displays the following message:

   ```
   Warning!
   Error message
   [Continue]
   ```

5. Press any key to enter the setup utility. The system will then display the Info Menu with current parameters values.

INFO MENU - DISPLAYS BASIC SYSTEM INFORMATION

The Info Menu is a display only screen that provides the configuration information for your notebook.

The following table shows the names of the menu fields for the Info menu and the information displayed in those fields. These fields are for information purposes only, and cannot be modified by the user.

> The information, including CPU type and speed, and total memory, displayed on this screen varies according to the unit you purchased.

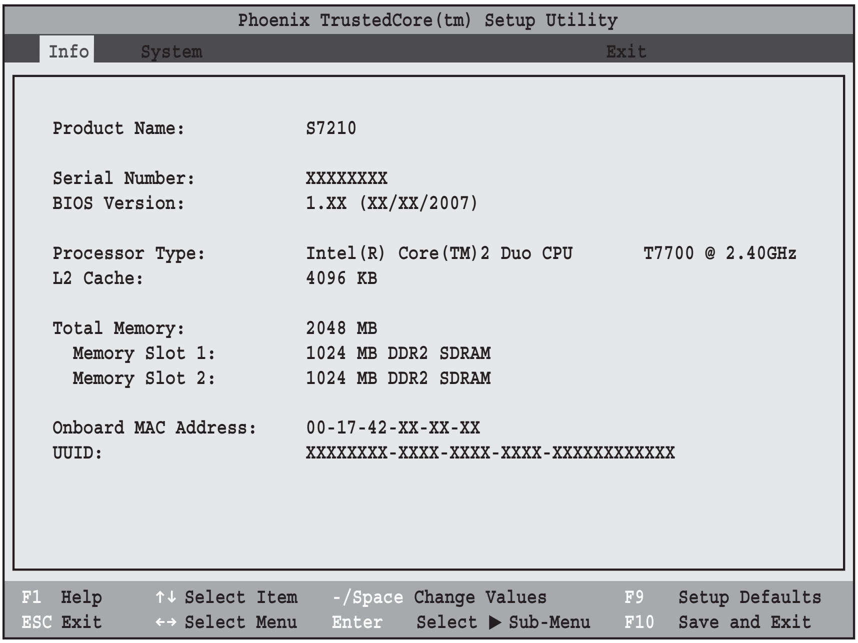


Figure 1. Info Menu

Table 1: Fields, Options and Defaults for the Info Menu

Menu Field	Default	Menu Field	Default
Note that all of the fields on this screen are display only and are for reference. Note that some the information listed **will be different for your system**, depending upon the system configuration.			
Product Name:	S6510	Total Memory:	2048 MB
Serial Number:	Not Defined	Memory Slot 1:	1024 MB DDR2 SDRAM
BIOS Version:	1.XX (XX/XX/2007)	Memory Slot 2:	1024 MB DDR2 SDRAM
Processor Type:	Intel(R) Core(TM)2 Duo CPU T7700 @ 2.40GHz	Onboard MAC Address:	XX-XX-XX-XX-XX-XX
L2 Cache:	4096 KB	UUID:	XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX

SYSTEM MENU – SETTING STANDARD SYSTEM PARAMETERS

The System Menu allows you to set or view the current system parameters. *(See Navigating through the Setup Utility on page 2 for more information.)*

The following tables show the names of the menu fields for the System menu and its submenus, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

System Time and System Date can also be set from your operating system without using the setup utility. Use the Date and Time icon on your Windows Control panel or type time or date from the MS-DOS prompt.

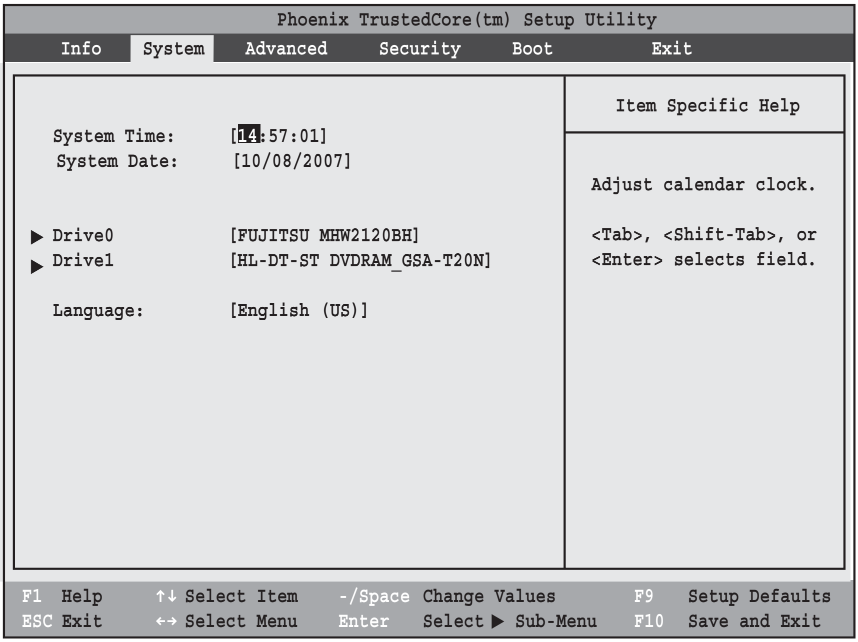


Figure 2. System Menu

Table 2: Fields, Options and Defaults for the System Menu

Note that the parameters listed in the following table may vary depending upon your system's configuration.

Menu Field	Options	Default	Description
System Time:	—	—	Sets and displays the current time. Time is in a 24 hour format of hours:minutes:seconds with 2 digits for each. (HH:MM:SS). Example: 16:45:57. You may change each segment of the time separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.
System Date:	—	—	Sets and displays the current date. Date is in a month/day/year numeric format with 2 digits each for month and day and 4 digits for year. (MM/DD/YYYY) for example: 03/20/2007. You may change each segment of the date separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.

Table 2: Fields, Options and Defaults for the System Menu

Note that the parameters listed in the following table may vary depending upon your system's configuration.

Menu Field	Options	Default	Description
Drive0	Selects the Drive0 Serial ATA drive submenu	The product number of the hard drive.	Display the type of device on this ATA/IDE interface. Pressing the Enter key selects the Serial ATA Drive0 submenu allowing additional device configuration options for this interface.
Drive1:	Selects the Drive1 Serial ATA drive submenu	The product number of the optical drive.	Display the type of device on this ATA/IDE interface, if there is one. Pressing the Enter key selects the Serial ATA Drive1 submenu allowing additional device configuration options for this interface.
Language:	▪ English (US) ▪ Japanese (JP)	[English (US)]	The default setting differs between the US/European and the Japanese model. Selects the display language for the BIOS.

Drive0 Submenu of the System Menu

The Drive0 submenu identifies what ATA devices are installed.

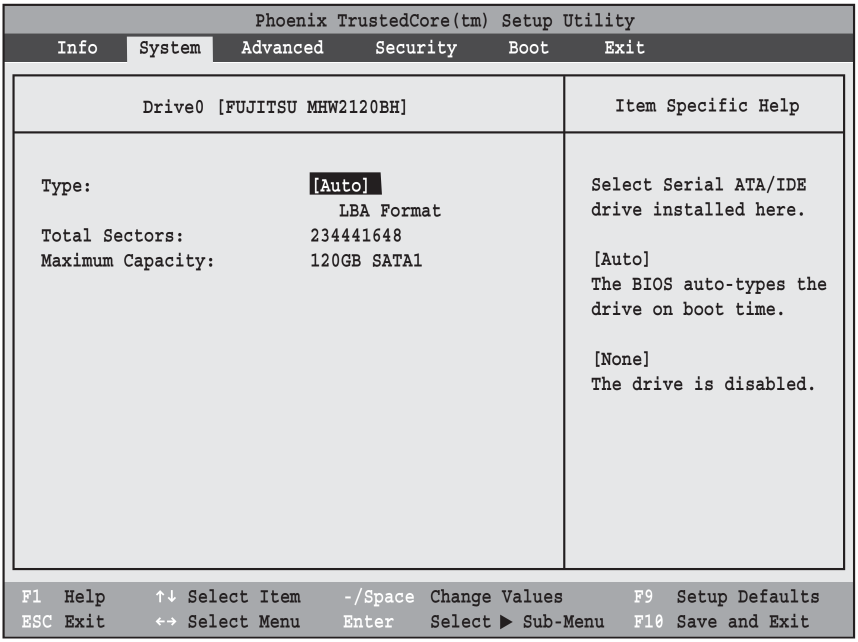


Figure 3. Drive0 Master Submenu

Table 3: Fields, Options and Defaults for the Drive0 Submenu of the System Menu

Menu Field	Options	Default	Description
Type:	▪ Auto ▪ None	[Auto]	Selects the hard drive device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following Setup items do not appear.
LBA Format			Logical Block Addressing (LBA)
Total Sectors:	---	---	The total number of sectors on your hard disk
Maximum Capacity:	---	---	The maximum capacity of your hard disk

Drive1 Submenu of the System Menu

The Drive1 submenu allows you to configure secondary ATA devices.

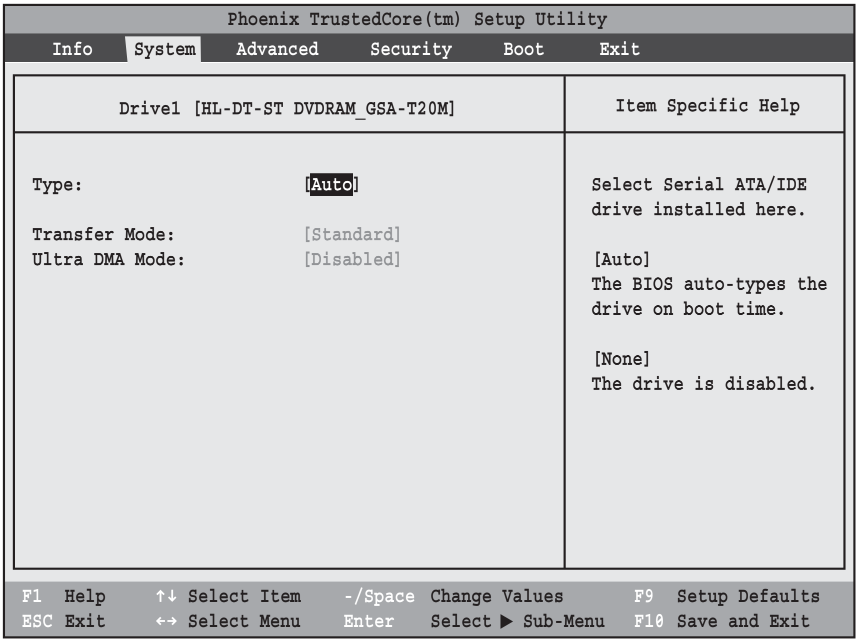


Figure 4. Drive1 Submenu

Table 4: Fields, Options and Defaults for the Drive1 Submenu of the System Menu

Menu Field	Options	Default	Description
Type:	■ Auto ■ None	[Auto]	NOTE: The Type field does not appear as a drop-down menu. Tap the spacebar to toggle the selections. Selects the ATA/ATAPI device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following setup items do not appear.
Transfer Mode:	■ Standard ■ Fast PIO 1 ■ Fast PIO 2 ■ Fast PIO 3 ■ Fast PIO 4 ■ Multiword DMA 1 ■ Multiword DMA 2	[Standard]	This option cannot be changed (automatically identified by the BIOS). Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. Multi-word DMA is automatically set to mode 1 for Fast PIO 1, Fast PIO 2, Fast PIO 3, and set to mode 2 for Fast PIO 4 / DMA.
Ultra DMA Mode:	■ Disabled ■ Mode 0 ■ Mode 1 ■ Mode 2 ■ Mode 3 ■ Mode 4 ■ Mode 5	[Disabled]	This option cannot be changed (automatically identified by the BIOS). Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode.

Exiting from System Menu

When you have finished setting the parameters on this menu, you can either exit from the setup utility, or move to another menu. If you wish to exit from the setup utility, press the [Esc] key or use the cursor keys to go to the Exit menu. If you wish to move to another menu, use the cursor keys.

ADVANCED MENU – SETTING DEVICE FEATURE CONTROLS

The Advanced Menu allows you to:

- Set the I/O addresses for the serial and parallel ports.
- Set the keyboard and mouse features.
- Select between the display panel and an external display.
- Enable or disable compensation for your display.
- Enable or disable the IDE, Mouse, LAN, and Wireless LAN controllers.
- Configure CPU and USB features in your system.

(See Navigating through the Setup Utility on page 2 for more information.)

The following tables show the names of the menu fields for the Advanced Menu and its submenus, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

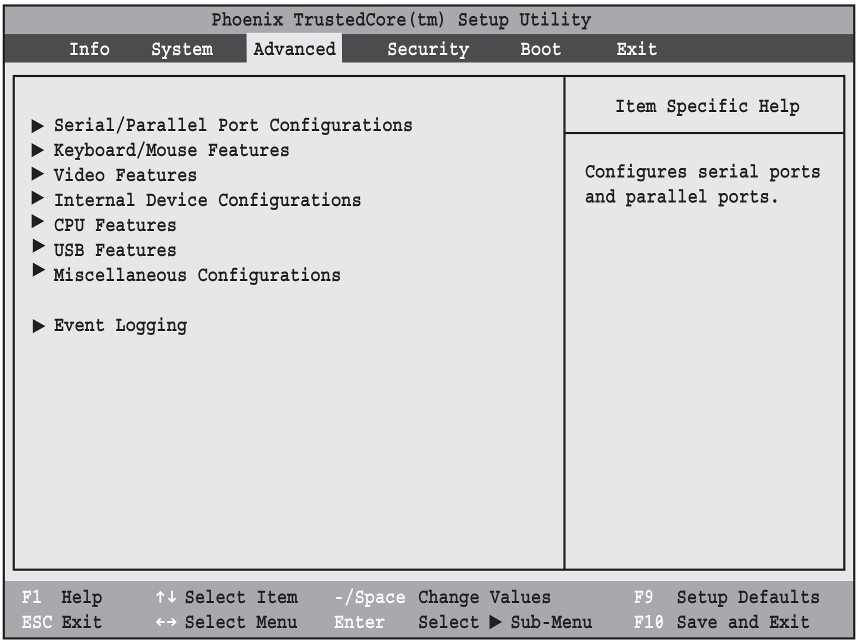


Figure 5. Advanced Menu

Table 5: Fields, Options and Defaults for the Advanced Menu

Menu Field	Description
Serial/Parallel Port Configurations	When selected, opens the Serial/Parallel Port Configurations submenu which allows the user to modify settings for serial, infrared and parallel ports.
Keyboard/Mouse Features	When selected, opens the Keyboard/Mouse Features submenu, which allows setting external and internal keyboard and mouse parameters.
Video Features	When selected, opens the Video Features submenu, which allows setting of the display parameters, including routing of video signals to different displays.
Internal Device Configurations	When selected, opens the Internal Device Configuration submenu, which allows enabling or disabling the ATA, IDE, Bluetooth, Modem, LAN, and WLAN Controllers.

Table 5: Fields, Options and Defaults for the Advanced Menu

Menu Field	Description
CPU Features	When selected, opens the CPU Features submenu to allow you to change the CPU speed for battery life optimization.
USB Features	When selected, opens the USB Features submenu to allow you to enable or disable legacy USB devices and SCSI SubClass support.
Miscellaneous Configurations	When selected, opens the Miscellaneous Configurations submenu to allow you to enable or disable the power button, Wake Up On LAN, and control volume settings.
Event Logging	When selected, opens the event logging submenu.

Serial/Parallel Port Configuration Submenu of the Advanced Menu

The Serial/Parallel Port Configuration submenu lets you set the I/O addresses and interrupt levels for the serial and parallel ports of your notebook.

I/O addresses, DMA channels and Interrupt levels can be entered in various ways, including via the BIOS setup utility, the control software for the I/O device, or the hardware. If any two ports or devices, serial or parallel, have the same address assigned, your notebook will not function normally. Keep a record of original settings before making any changes if restoration is required. See your hardware and software documentation as well as the setup utility to determine settings and limitations.

- To prevent IRQ and address conflicts, avoid changing the default settings. If you must change the settings, you can call 1-800-8Fujitsu for technical assistance.
- If your notebook emits a series of beeps that sounds like a code and the display is blank, refer to the Troubleshooting Section in the system User's Guide. The Troubleshooting Section includes a list of error messages and their meanings.
- All I/O addresses in Table 5 are in hexadecimal.

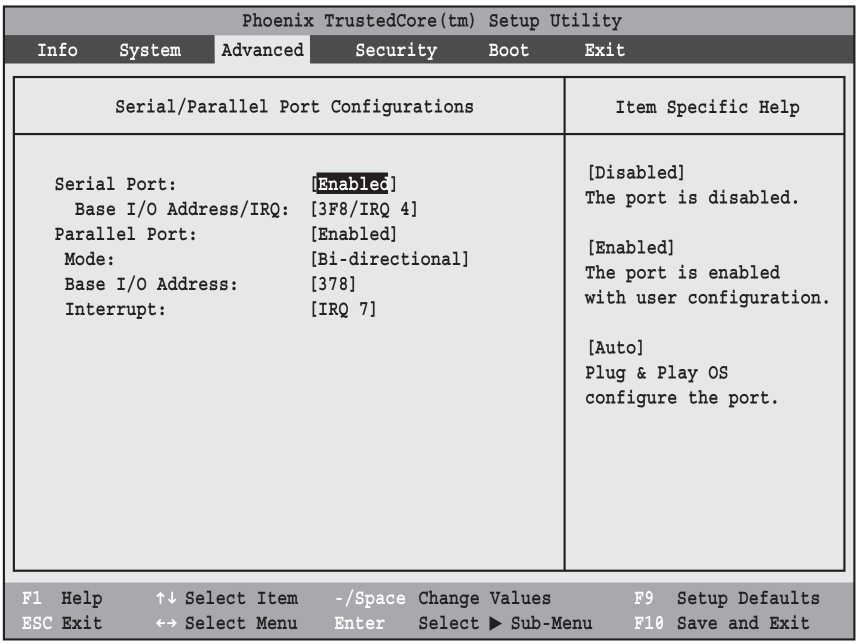


Figure 6. Serial/Parallel Port Configuration Submenu

Table 6: Fields, Options and Defaults for the Serial/Parallel Port Configuration Submenu of Advanced Menu

Menu Field	Options	Default	Description
Serial Port:	■ Disabled ■ Enabled ■ Auto	[Enabled]	Configures the serial port using either no configuration (Disabled), a user defined configuration (Enabled), or by allowing the BIOS or OS to choose the configuration (Auto).
Base I/O Address/IRQ:	■ 3F8/IRQ 4 ■ 2F8/IRQ 3 ■ 3E8/IRQ 4 ■ 2E8/IRQ 3	[3F8/IRQ 4]	Allows user to set the serial port base I/O address and interrupt request when serial port is Enabled.
Parallel Port:	■ Disabled ■ Enabled ■ Auto	[Enabled]	Configures the parallel port using either no configuration (Disabled), a user defined configuration (Enabled), or by allowing the BIOS or OS to choose the configuration (Auto).
Mode:	■ Output Only ■ Bi-directional ■ ECP	[Bi-directional]	When the parallel port is enabled this option is available allowing the user to set the parallel port mode. Bi-directional allows two-way transfer of information between your notebook and a connected parallel device. Output Only (Half Duplex) allows information to be transferred in only one direction, from your notebook to the printer or similar device. ECP Mode allows communication with the ECP class of parallel I/O devices.
Base I/O address:	■ 378 ■ 278 ■ 3BC	[378	Allows user to set the parallel port base I/O address when the parallel port is Enabled.
Interrupt:	■ IRQ 5 ■ IRQ 7	[IRQ 7]	Allows user to set the parallel port interrupt when the parallel port is Enabled.

Keyboard/Mouse Features Submenu of the Advanced Menu

The Keyboard/Mouse Features submenu is for setting the parameters of the integrated and external mouse and keyboard.

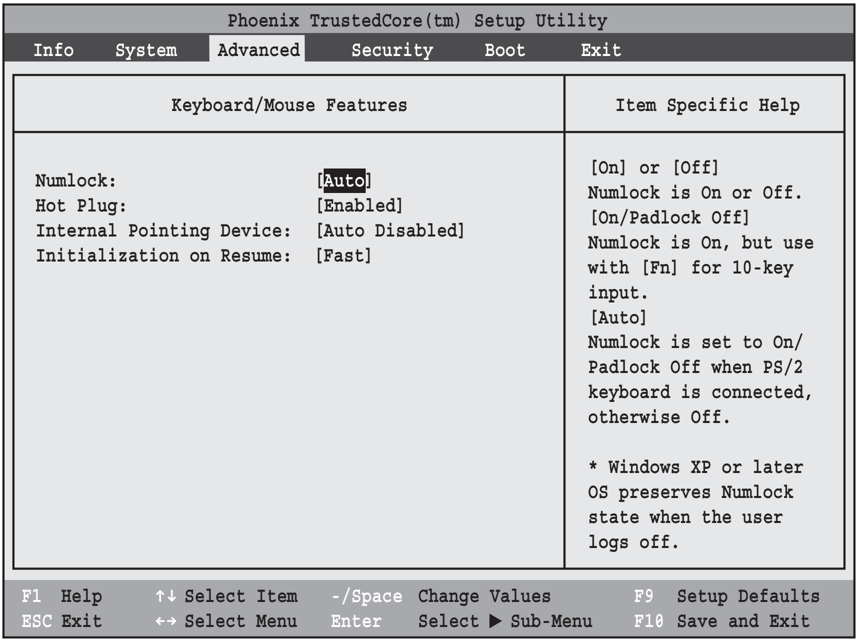


Figure 7. Keyboard/Mouse Features Submenu

Table 7: Fields, Options and Defaults for the Keyboard/Mouse Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Numlock:	■ Auto ■ On ■ Off ■ On/Padlock Off	[Auto]	Sets the NumLock function state when the computer completes booting. When [On] or [Off], Numlock is on or off. When [On/Padlock Off] is selected, Numlock is on, but [Fn] key must be pressed used for 10-key input. When [Auto] is selected, Numlock is set to On/Padlock Off when a PS/2 keyboard is connected, otherwise it is off. Windows XP (or later OS) preserves Numlock state when the user logs off.
Hot Plug:	■ Disabled ■ Enabled	[Enabled]	Enables and disables the ability to plug a mouse or keyboard into the PS/2 port and have it immediately recognized and activated.
Internal Pointing Device:	■ Auto Disabled ■ Manual Setting ■ Always Enabled ■ Always Disabled	[Auto Disabled]	Sets the device controlling the mouse cursor on the screen. Always Enabled makes the pointing device always enabled whether there is an external mouse or not. Always Disabled makes the pointing device always disabled. Auto Disabled disables the internal pointing device when an external pointing device is connected to the PS/2 port. Manual Setting allows the device to be enabled or disabled using a HotKey.
Initialization on Resume:	■ Fast ■ Normal	[Fast]	When Fast is selected, initialization for the external PS/2 devices is optimized to speed up on Resume. When Normal is selected, initialization is not optimized.

Video Features Submenu of the Advanced Menu

The Video Features submenu is for setting the display parameters.

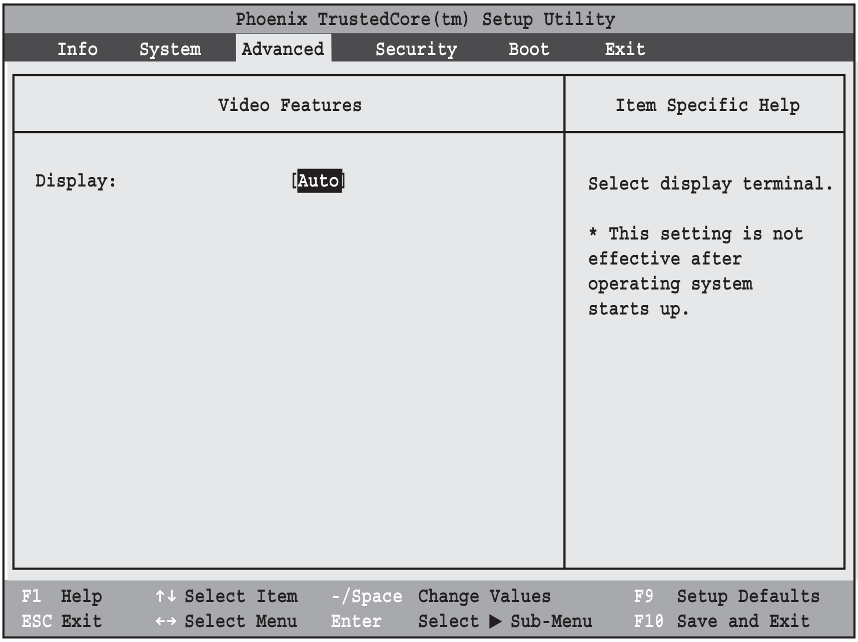


Figure 8. Video Features Submenu

Table 8: Fields, Options and Defaults for the Video Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Display:	■ Internal Flat Panel ■ External (Analog) ■ External (Digital) ■ Auto	[Auto]	Selects where the video signal will be routed. Note that this setting is overridden after Windows starts up.

Internal Device Configurations Submenu of the Advanced Menu

The Internal Device Configuration submenu allows the user to enable or disable IDE, Bluetooth, LAN and Wireless LAN Controllers.

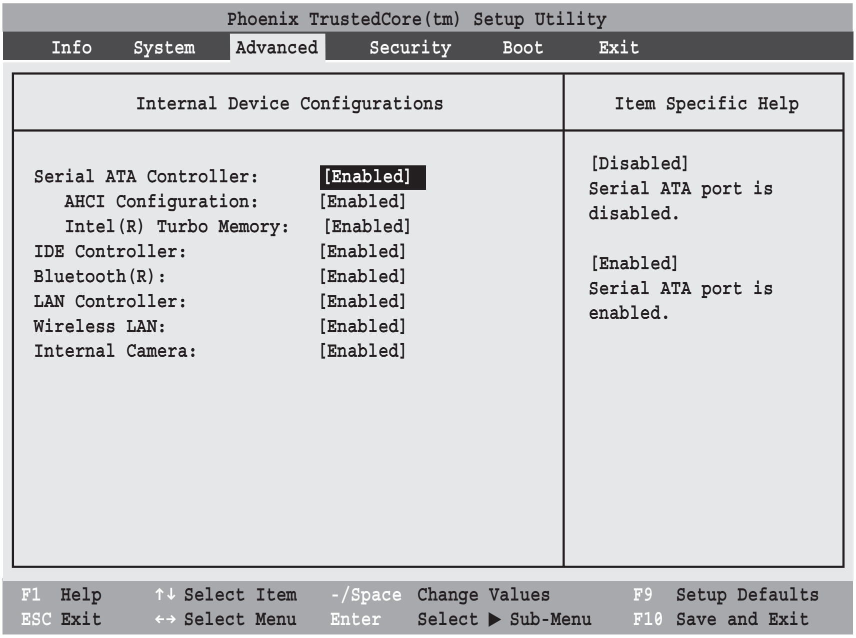


Figure 9. Internal Device Configuration Submenu

Table 9: Fields, Options and Defaults for the Internal Device Configuration Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Serial ATA Controller:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the Serial ATA port.
AHCI Configuration:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the selected Advanced Host Controller Interface (AHCI).
Intel(R) Turbo Memory:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the Intel Turbo Memory feature,.
IDE Controller:	■ Disabled ■ Enabled	[Enabled]	Enables or disables selected IDE devices.
Bluetooth Controller:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the Bluetooth controller.
LAN Controller:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the LAN controller.
Wireless LAN:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the Wireless LAN controller.
Internal Camera:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the controller for the built-in camera.

CPU Features Submenu of the Advanced Menu

The CPU Features submenu provides options for configuring the Intel Core Multi-Processing and SpeedStep power management features of the CPU.

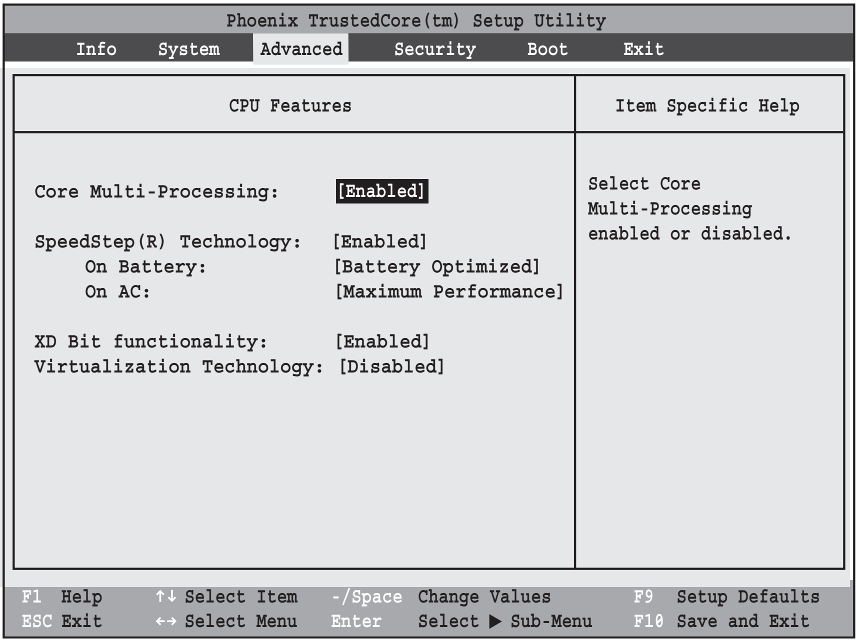


Figure 10. CPU Features Submenu

Table 10: Fields, Options and Defaults for the CPU Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Core Multi-Processing:	■ Enabled ■ Disabled	[Enabled]	Enables or disables the Intel Core Multi-Processing features.
SpeedStep(R) Technology:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the SpeedStep(R) Technology features. When disabled, On Battery and On AC are disabled.
On Battery:	■ Maximum Performance ■ Battery Optimized ■ Automatic	[Battery Optimized]	When Maximum Performance is selected, CPU speed is maximized. When Battery Optimized is selected, CPU *power requirements* are optimized for battery operation. When Automatic is selected, the CPU speed is determined by the power source used.
On AC:	■ Maximum Performance ■ Battery Optimized ■ Automatic	[Maximum Performance]	When Maximum Performance is selected, CPU speed is maximized. When Battery Optimized is selected, CPU *power requirements* are optimized for battery operation. When Automatic is selected, the CPU speed is determined by the power source used.
XD Bit functionality:	■ Enabled ■ Disabled	[Enabled]	Enables or disables the Execute Disable Bit feature.
Virtualization Technology:	■ Disabled ■ Enabled	[Disabled]	Enables or disables Virtualization Technology, an Intel technology which includes hardware enhancements to improve upon software-based virtualization technologies.

USB Features Submenu of the Advanced Menu

The USB Features submenu provides options for enabling or disabling the USB devices.

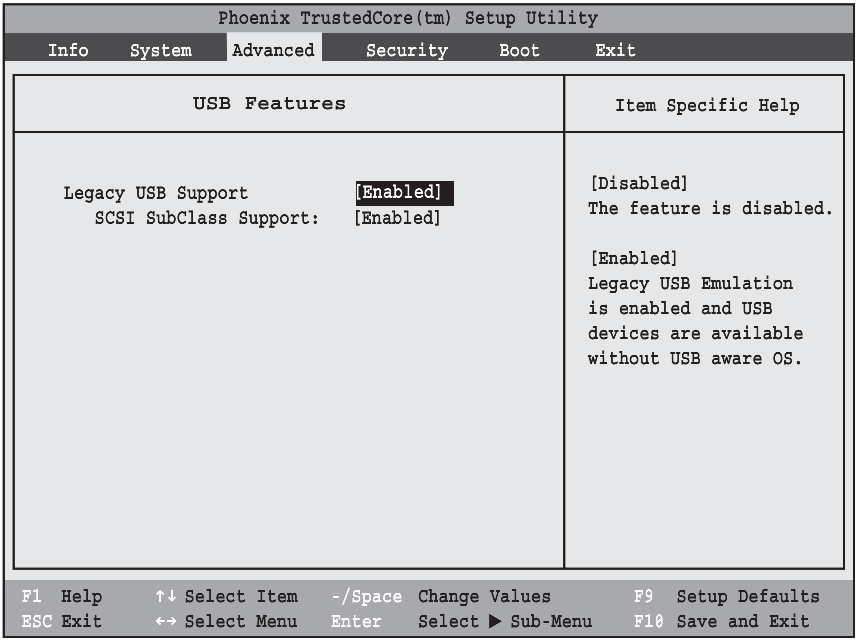


Figure 11. USB Features Submenu

Table 11: Fields, Options and Defaults for the USB Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Legacy USB Support:	▪ Disabled ▪ Enabled	[Enabled]	When Enabled is selected, Legacy USB Emulation is enabled and the USB devices are available without a USB-aware OS. When Disabled is selected, Legacy USB support is disabled.
SCSI SubClass Support:	▪ Disabled ▪ Enabled	[Enabled]	When Enabled is selected, USB devices that belong to the SCSI subclass in the mass storage class (e.g., USB Memory Key) are enabled. Note that enabling this feature may cause the system to hang during POST, depending on the device that is connected.

Miscellaneous Configurations Submenu of the Advanced Menu

The Miscellaneous Configurations submenu provides options for enabling or disabling the power button and the Wake Up On LAN feature, and setting the volume and video memory size.

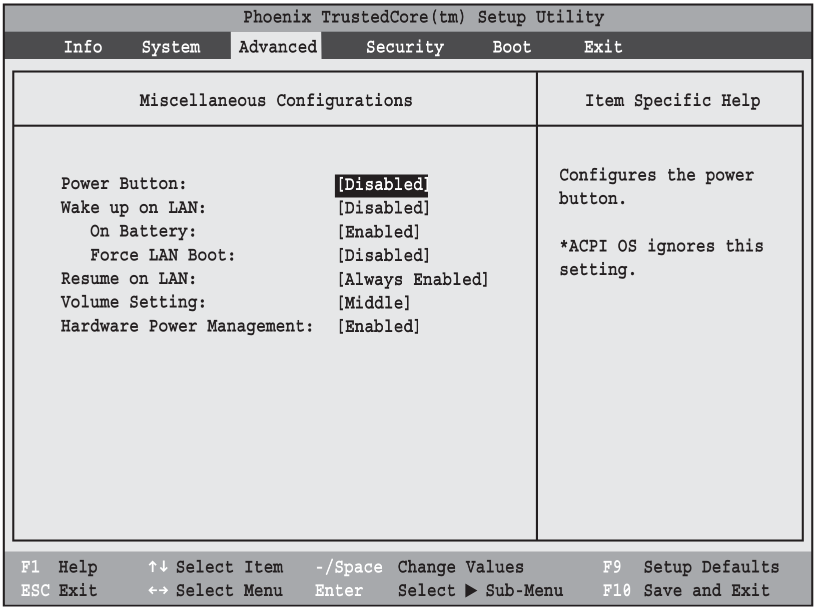


Figure 12. Miscellaneous Configurations Submenu

Table 12: Fields, Options and Defaults for the Miscellaneous Configurations Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Power Button:	■ Disabled ■ Power Off	[Disabled]	Selecting Disabled disables the power button. Selecting Power Off allows you to turn off system power with the power button.
Wake up on LAN:	■ Disabled ■ Enabled	[Disabled]	Selecting Enabled allows the system to wake when the internal LAN device receives a specific signal while in power-off state. Selecting Disabled disables this feature.
On Battery:	■ Enabled ■ Disabled	[Enabled]	When this is disabled, Wake up on LAN is only enabled when the AC Adapter is connected.
Force LAN Boot:	■ Disabled ■ Enabled	[Disabled]	This feature is active only when “Wake up on LAN” is enabled. When enabled, in the event of a system wake-up on LAN, the system will try to first boot from the LAN before attempting to boot from any other device, regardless of the BIOS boot priority settings or disabling of the Preboot Execution Environment.
Resume on LAN:	■ On AC mode only ■ Always Enabled	[Always Enabled]	When [On AC mode only] is selected, wake up on LAN from sleep or hibernate is enabled only when the AC Adapter is connected. Note that Wake up on LAN from Sleep or Hibernate is determined by the OS setting.

Table 12: Fields, Options and Defaults for the Miscellaneous Configurations Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Volume Setting:	■ Off ■ Minimum ■ Middle ■ Maximum	[Middle]	Selects the initial volume setting for the system.
Hardware Power Management:	■ Disabled ■ Enabled	[Enabled]	Enables or disables the Hardware Power Management feature.

Event Logging Submenu of the Advanced Menu

The Event Logging submenu configures event logging features for DMI events.

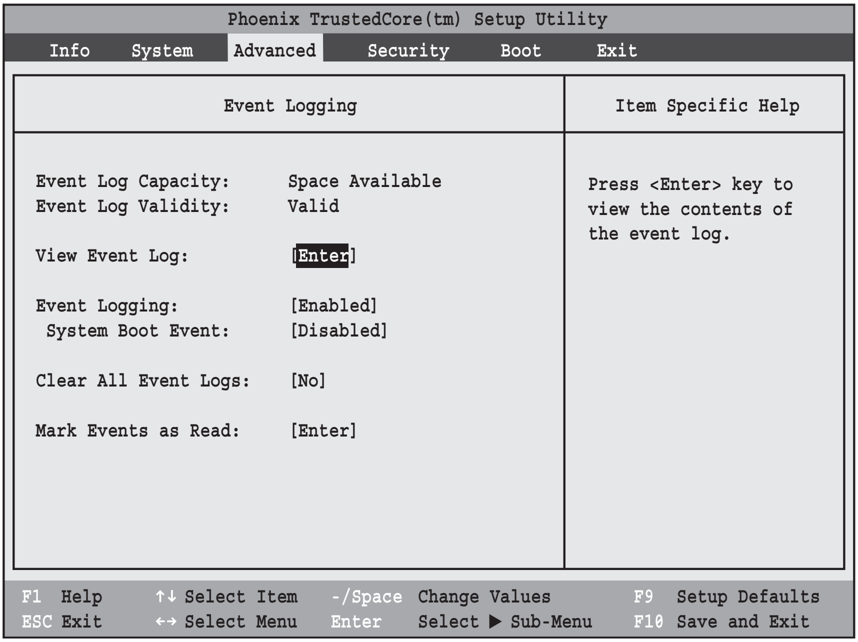


Figure 13. Event Logging Submenu

Table 13: Fields, Options and Defaults for the Event Logging Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Event Log Capacity:		Space Available	Display only
Event Log Validity:		Valid	Display only
View Event Log:	■ Enter	[Enter]	Allows you to view content of event log
Event Logging:	■ Disabled ■ Enabled	[Enabled]	Turns event logging on and off for all DMI events.
System Boot Event:	■ Disabled ■ Enabled	[Disabled]	Turns event logging on and off for DMI system boot events.
Clear All Event Logs:	■ No ■ Yes	[No]	When set to [Yes] all event logs will be cleared at next boot.
Mark Events as Read:	■ Enter	[Enter]	Lets you mark all events currently in the event log as having been read.

SECURITY MENU – SETTING THE SECURITY FEATURES

The Security menu allows you to set up the data security features of your notebook to fit your operating needs and to view the current data security configuration. *(See Navigating through the Setup Utility on page 2 for more information.)*

The following tables show the names of the menu fields for the Security Menu and its submenus, all the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use. The default condition is no passwords required and no write protection.

Remember your passwords! If you set and forget your User and Master hard disk passwords, Fujitsu Computer Systems will not be able to reset it. You may lose data and have to replace your system board or hard disk drive.

- Entering a password incorrectly 3 times in a row causes the keyboard and mouse to be locked out and the warning `[System Disabled]` to be displayed. If this happens, restart the computer by turning off and on the power with the power switch and use the correct password on reboot.
- If you make an error when re-entering the password a `Warning` will display on the screen. To try again press [Enter], then retype the password. Press [Esc] to abort the password setting process.
- If the Power Management Security is Enabled and the Password on Boot is Disabled you will not have to type your password upon resuming the system from the Suspend or Save-to-Disk modes. Power Management Security will work only if Password boot is enabled.
- Boot sector protection must be set to `[Normal]` to install or upgrade an operating system.

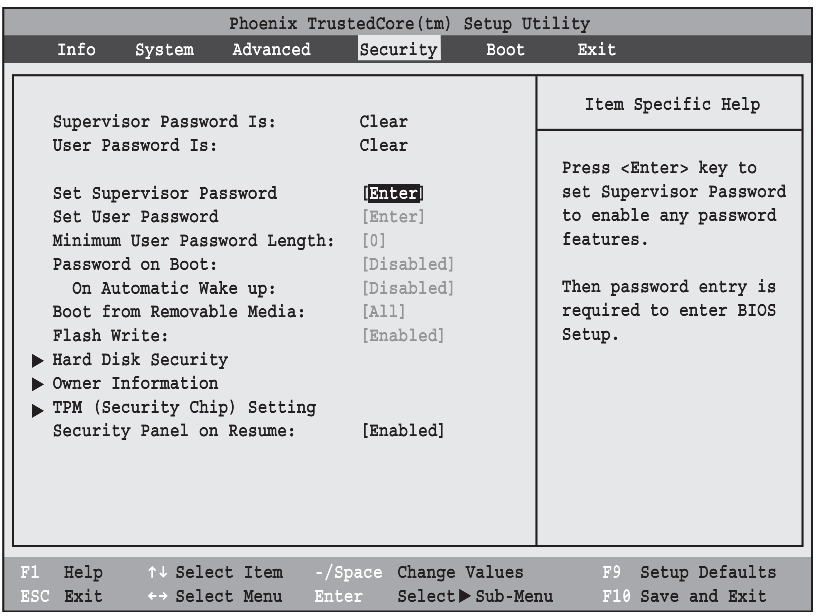


Figure 14. Security Menu

Table 14: Fields, Options and Defaults for the Security Menu

Menu Field	Options	Default	Description
Supervisor Password is:	—	Clear	A display-only field. Set is displayed when the system supervisor password is set and Clear when it is not.
User Password is:	—	Clear	A display-only field. Set is displayed when the general user password is set, and Clear when it is not.
Set Supervisor Password	—	[Enter]	Sets, changes or cancels the Supervisor Password. The Supervisor Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a Supervisor Password is set it must be used to access the BIOS setup utility.
Set User Password	—	[Enter]	This field can only be accessed if the Supervisor Password is set. Sets, changes or cancels the User Password. A User Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press [Enter] key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a User Password is set it must be used to access the BIOS setup utility.
Minimum User Password Length:	—	[0]	Supervisor can set password length (0 to 8) for user password. User cannot set a password shorter than the minimum length.
Password on Boot:	▪ Disabled ▪ First Boot ▪ Every Boot	[Disabled]	When set to First Boot, a password (User or Supervisor) is required just once after the Power On Self Test (POST) before the operating system will be read from a disk. When set to Every Boot, a password (User or Supervisor) is required every time after the Power On Self Test (POST) before the operating system will be read from a disk. When set to Disabled no password is required.
On Automatic Wake up:	▪ Disabled ▪ Enabled	[Disabled]	When disabled, password entry is not required when the system wakes up automatically. When enabled, password entry is required upon wake up.
Boot from Removable Media:	▪ All ▪ Supervisor only	[All]	Supervisor only allows access to boot the computer to removable media after the Supervisor Password is entered.
Flash Write:	▪ Disabled ▪ Enabled	[Enabled]	When disabled, the BIOS Flash memory will be write protected.
Hard Disk Security:	—	—	Configures hard disk security features
Owner Information:	—	—	Sets Owner information.
TPM (Security Chip) Setting	—	—	Opens the Trusted Platform Module (TPM) Security Chip Setting submenu to configure the Security Chip.
Security Panel on Resume:	▪ Disabled ▪ Enabled	[Enabled]	Enables or disables the Security Panel feature upon Resume from Suspend.

Exiting from the Security Menu

When you have finished setting the parameters on the Security Menu, you can either exit from setup utility or move to another menu. If you wish to exit from setup utility, press the [Esc] key to go to the Exit Menu. If you wish to move to another menu, use the cursor keys.

Hard Disk Security Submenu of the Security Menu

The Hard Disk Security submenu is for configuring hard disk security features.

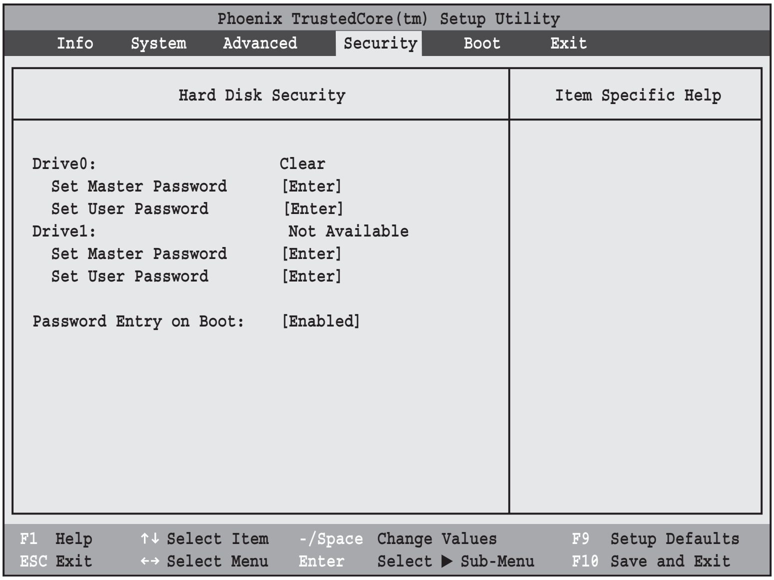


Figure 15. Hard Disk Security Submenu

Table 15: Fields, Options and Defaults for the Hard Disk Security Submenu of the Security Menu

Menu Field	Options	Default	Description
Drive0:	____	Clear	Display-only. Default is Clear. When the Drive0 Password has been set, the field changes to Set. When this password is set, the primary hard disk drive cannot be used in another system unless the password is entered.
Set Master Password	____	[Enter]	Sets, changes or cancels the Drive0 Master Password. The Drive0 Master Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. When a Drive0 Master Password is set, it must be used to access the hard drive if it is used in another system. Note that the password will not take effect until the system has been rebooted.
Set User Password	____	[Enter]	Sets, changes or cancels the Drive0 User Password. The Drive0 User Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. When a Drive0 User Password is set, it must be used to access the modular hard drive if it is used in another system. Note that the password will not take effect until the system has been rebooted.
Drive1:	____	Clear	Display-only. Default is Clear. When the Drive1 Password has been set, the field changes to Set. When this password is set, the primary hard disk drive cannot be used in another system unless the password is entered.
Set Master Password	____	[Enter]	Sets, changes or cancels the Drive1 Master Password. The Drive1 Master Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. When a Drive1 Master Password is set, it must be used to access the hard drive if it is used in another system. Note that the password will not take effect until the system has been rebooted.

Table 15: Fields, Options and Defaults for the Hard Disk Security Submenu of the Security Menu

Menu Field	Options	Default	Description
Set User Password	___	[Enter]	Sets, changes or cancels the Drive1 User Password. The Drive1 User Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. When a Drive1 User Password is set, it must be used to access the modular hard drive if it is used in another system. Note that the password will not take effect until the system has been rebooted.
Password Entry on Boot:	■ Disabled ■ Enabled	[Enabled]	When set to disabled, entry of a Hard Disk Password is not required before OS boot. (The hard disk is still password-protected without password entry.)

Owner Information Submenu of the Security Menu

The Owner Information submenu is for setting owner information. Note that the owner information cannot be set without having entered a Supervisor Password.

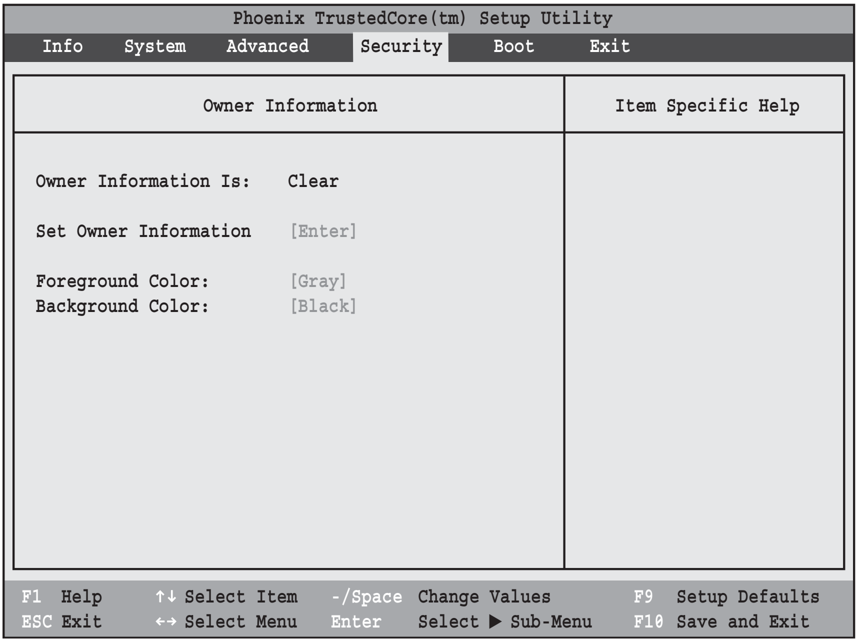


Figure 16. Owner Information Submenu

Table 16: Fields, Options and Defaults for the Owner Information Submenu of the Security Menu

Menu Field	Options	Default	Description
Owner Information Is:	—	Clear	Display only.
Set Owner Information:	—	[Enter]	Field to write owner information, (i.e., name).
Foreground Color:	■ Black ■ Blue ■ Green ■ Cyan ■ Red ■ Magenta ■ Brown ■ White ■ Gray ■ Light Blue ■ Light Green ■ Light Cyan ■ Light Red ■ Light Magenta ■ Yellow ■ Bright White	[Gray]	Set foreground color.
Background Color:	■ Black ■ Blue ■ Green ■ Cyan ■ Red ■ Magenta ■ Brown ■ White ■ Gray ■ Light Blue ■ Light Green ■ Light Cyan ■ Light Red ■ Light Magenta ■ Yellow ■ Bright White	[Black]	Set background color.

TPM (Security Chip) Setting Submenu of the Security Menu

The Trusted Platform Module (TPM) Security Chip Setting submenu is used to enable or disabled the embedded security chip.

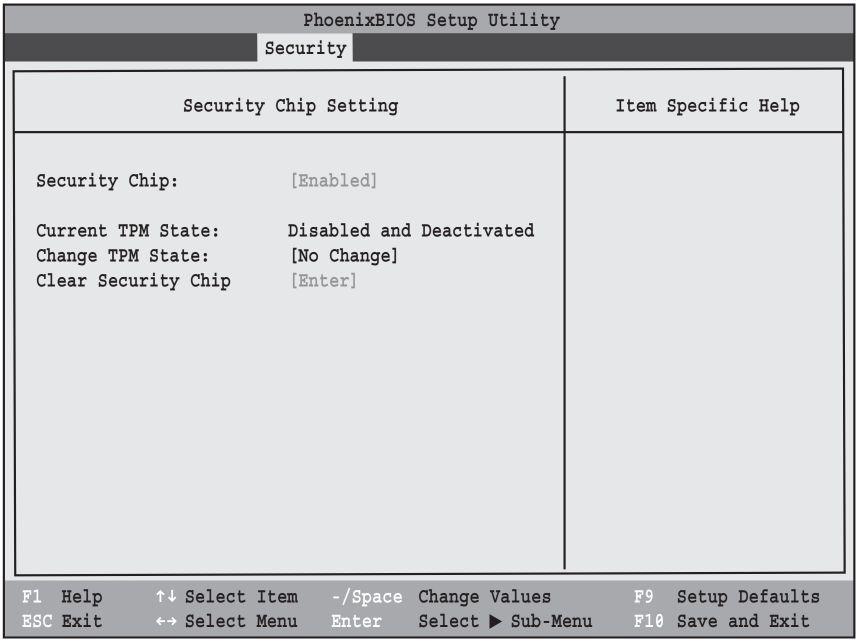


Figure 17. TPM (Security Chip) Setting Submenu

Table 17: Fields, Options and Defaults for TPM (Security Chip) Submenu of Security Menu

Menu Field	Options	Default	Description
Security Chip:	■ Disabled ■ Enabled	[Enabled]	Allows you to enable or disable the Trusted Platform Module (TPM) chip. Note that this is only active if a Supervisor Password has been entered. A reboot is required after exit to configure the Security Chip correctly. Clear Security Chip option becomes selectable after reboot.
Current TPM State:	—	Disabled and Deactivated	Indicates the current state of the TPM chip.
Change TPM State:	■ No Change ■ Disable and Deactivate	[No Change]	Allows you to enable or disable the TPM chip when the Supervisor Password has been set.
Clear Security Chip	■ Enter	[Enter]	Allows you to clear the Security Chip. Note that this does not allow you to access already-encrypted data.

BOOT MENU – SELECTING THE OPERATING SYSTEM SOURCE

The Boot Menu is used to select the order in which the BIOS searches sources for the operating system. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See Navigating through the Setup Utility on page 2 for more information.)*

The following tables show the names of the menu fields for the Boot menu and its submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

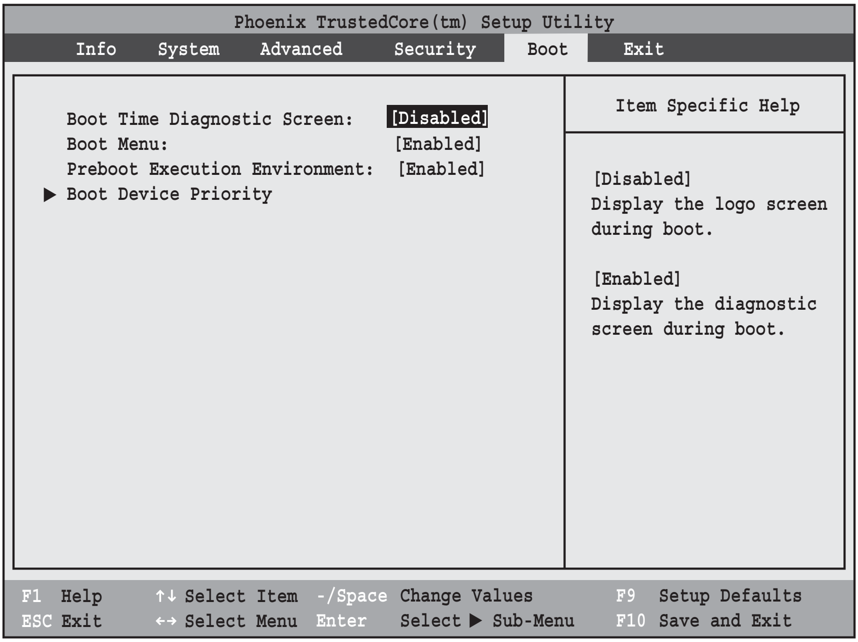


Figure 18. Boot Menu

Table 18: Fields, Options and Defaults for the Boot Menu

Menu Field	Options	Default	Description
Boot-time Diagnostic Screen:	■ Disabled ■ Enabled	[Disabled]	Turns on and off display of test results instead of Fujitsu logo screen during Power On Self Test.
Boot Menu:	■ Disabled ■ Enabled	[Enabled]	When Disabled, the Boot Menu is disabled and the [F12] key is ignored. When Enabled, the Boot Menu is enabled.
Preboot Execution Environment:	■ Disabled ■ Enabled	[Enabled]	Turns on and off the preboot execution environment feature.
Boot Device Priority	—	—	This menu allows setting up the source for the operating system. See “The Boot Device Priority Submenu” in the following section.

Boot Device Priority Submenu of the Boot Menu

The Boot Device Priority submenu is for setting the order of checking of sources for the operating system.

- Be careful of the operating environment when booting from a CD or you may overwrite files by mistake.
- A bootable CD-ROM has either a floppy disk format or a hard drive format. When the bootable CD-ROM is used, the drive allocations change automatically without changing the BIOS setup. If a floppy disk format is used, the CD-ROM becomes Drive A. The CD-ROM will only take drive C: (hard drive format) if the internal hard drive is not present or is disabled. The bootable CD-ROM can never use a C: designation if a formatted internal hard drive is present since the C: designator is always reserved for the internal hard drive.The boot sequence ignores the new drive designations, however, your application software will use the new designations.

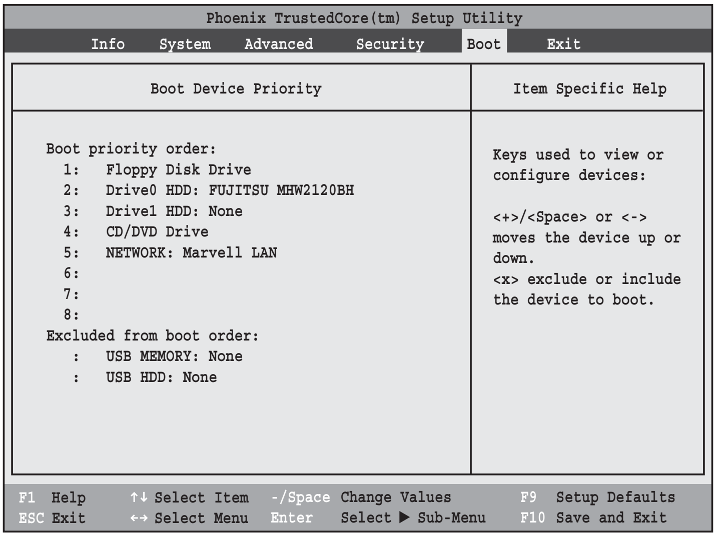


Figure 19. Boot Device Priority Submenu

Table 19: Fields, Options and Defaults for the Boot Device Priority Submenu of the Boot Menu

Menu Field	Description
Boot priority order: 1: Floppy Disk Drive 2: Drive0: 3: Drive1 4: CD/DVD Drive 5: NETWORK: 6: 7: Excluded from boot order: : USB MEMORY: : USB HDD:	The boot selections determine the order in which the BIOS searches for the operating system during a startup sequence. To change the order, highlight one source by using the [up] or [down] cursor keys and then press the [+] or [-] key to change the order number. Tapping [x] removes from the list a device that is not installed. Tapping [x] on an item in the Excluded list adds the device to the Boot priority list. Be sure to save your changed order when you exit the BIOS setup utility. NOTE: Be aware that if you use the CD-ROM drive as the first boot device, certain files may be overwritten, depending upon your operating environment.

Exiting from Boot Menu

When you have finished setting the boot parameters with the Boot Menu, you can either exit from the setup utility or move to another menu. If you wish to exit from the setup utility press the [Esc] key to go to the Exit Menu. If you wish to move to another menu, use the cursor keys.

EXIT MENU – LEAVING THE SETUP UTILITY

The Exit Menu is used to leave the setup utility. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See Navigating through the Setup Utility on page 2 for more information.)*

The following table shows the names of the menu fields for the Exit menu, the default settings and a description of the field's function and any special information needed to help understand the field's use.

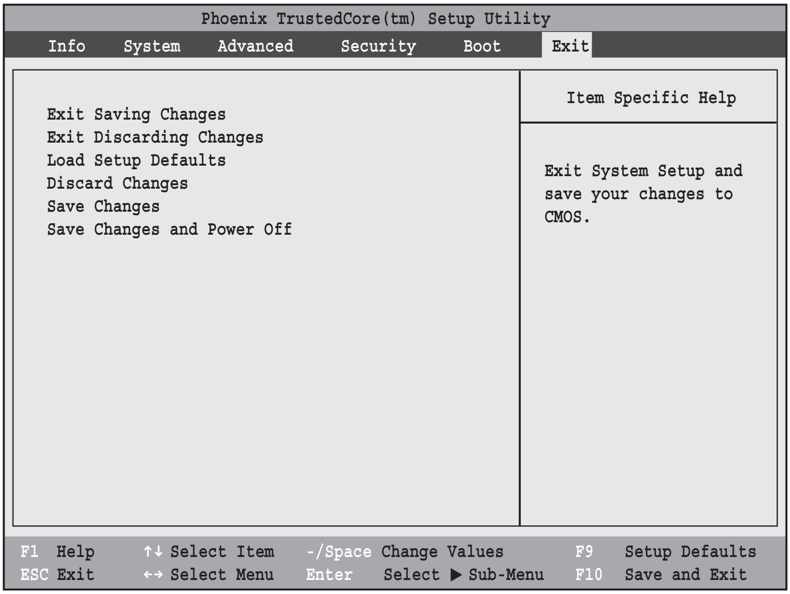


Figure 20. Exit Menu

Table 20: Fields, Options and Defaults for the Exit Menu

Menu Field	Description
Exit Saving Changes	Exit Saving Changes and Exit will store all the entries on every menu of the setup utility to the BIOS memory, then exit the utility. A confirmation message `Save Configuration changes and exit now? [Yes][No]` is displayed.
Exit Discarding Changes	Selecting Exit Discarding Changes and Exit will exit the setup utility with out writing to the BIOS memory. When the BIOS recognizes this selection it will load the operating system and begin operation.
Load Setup Defaults	Selecting Load Setup Defaults will load the factory preset default values for all menu fields, then display the message `Load default configuration now? [Yes] [No].` When confirmed the setup utility will return to the Exit Menu. To return to another menu follow the directions in the Navigating Through the Setup Utility Section.
Discard Changes	Selecting Discard Changes will load the previous values in BIOS memory for all menu fields. The message `Load previous configuration now? [Yes] [No]` will be displayed. When confirmed the setup utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility Section.
Save Changes	Selecting Save Changes will cause the new settings in all menus to be written to the BIOS memory. The message `Save configuration changes now? [Yes] [No]` will be displayed. When confirmed, the setup utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility section.
Save Changes and Power Off	Selecting Save Changes and Power Off will cause the new settings in all menus to be written to the BIOS memory. The message `Save configuration changes and power off now? [Yes] [No]` will be displayed. When confirmed, the system will shut down. If No is selected, the system will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility section.